REMARKS

On page 2 of the Action, claims 2, 3, 10 and 11 were rejected under 35 U.S.C. 112, second paragraph. In this respect, a copy of an article showing JIS Z 8730 has been filed herewith. The article consists of the same material incorporated by reference in the referencing application. In the parent application, now U.S. Patent No. 6,355,260, reference to JIS Z 8730 was permitted in the claims. Therefore, please withdraw the rejection.

On page 3 of the Action, claims 1-6 were rejected by JP 48-29528, and claims 1-8 were rejected by JP 60-228460. On page 4 of the Action, claims 9-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Schmid et al. in view of Nishihara et al. In view of the rejections, claims 1-3 and 10-15 have been amended, and new claims 17-21 have been added.

As clearly recited in claim 1, in a method of manufacturing pigments, a dispersion of pigment particles is prepared, and a silicic acid solution is added to the dispersion of the pigment particles to have silicic acid polymer deposited on surfaces of the pigment particles. Thus, the surfaces of the pigment particles are coated homogeneously with the silicic acid polymer having refractive index of at most 1.8 to thereby reduce a change of color of the pigment particles coated with the silicic acid polymer when caprylic triglyceride or water is added.

It is to be understood that in the present invention, silicic acid solution is used to form the silicic acid polymer on the pigment particles. The silicic acid solution is different from silicic acid or silicate. As shown on page 180, lines 11-15 of "THE CHEMISTRY OF SILICA" attached herewith, silicic acid solution is formed from $No_2SiO_4 \cdot 9H_2O$ with ion-exchange resin. The solution is stable until the concentration of SiO_2 is up to 5-6 wt.% in room temperature. The "solution of monomer" in the article means silicic acid solution as stated on page 177, line 12 as "monomeric silicic acid, $Si(OH)_4$".

In JP '528, pigments are coated with silicate by heating silicic acid or silicate in water to increase solubility thereof, and then cooling the solution to deposit or form layers on the pigments. Although solubility of silicic acid is very low in water, as the temperature of the solution is increased, solubility of silica in the solution is increased, such as 0.05% at 200 °C. Thus, when the solution is cooled, silica is deposited on the pigments. In the Examples in JP '528, glass and other materials containing silica is heated in water or alkaline water, and is cooled.

In claim 1 of the invention, as explained above, silicic acid solution is used to form the silicic acid polymer on the pigment particles. It is not required to heat and cool the solution to deposit the material on the particles. In JP '528, the solubility of silicic acid in water is different by temperature, and this difference in solubility is utilized to form the coating. Thus, the system in forming the layer on the particles in claim 1 of the invention is entirely different from that of JP '528.

In JP '406, silica coatings are formed on the particles. Inorganic silica compounds and particles may be mixed and pulverized to form the coated particles by mechanical and chemical reactions. The particles may be dispersed in a solution containing silicic acid with sodium or potassium and adding acid thereto to neutralized. Organic silicic compound may be added into alcohol, to which particles are added. In claim 1 of the invention, silicic acid solution is used to form the silicic acid polymer on the pigment particles. However, JP '406 does not use the silicic acid solution to deposit the silica layer on the particles. Thus, the method in claim 1 of the invention is not disclosed or suggested in JP '406.

In claims 10 and 11, a dispersion of pigment particles is prepared, and a hydrolytic organic silicon compound or organic aluminum compound is added to the dispersion of the pigment particles so that the organic compound is hydrolyzed to form

inorganic coating films on the surfaces of the pigment particles. The surfaces of the pigment particles are coated homogeneously with the inorganic compound films having refractive index of at most 1.8 to thereby reduce a change of color of the pigment particles coated with the inorganic coating films when caprylic triglyceride or water is added.

In claim 10, the pigment particles coated with the inorganic coating films have a decrease rate of a color difference defined by Hunter's color difference formula defined in 6.3.2 of JIS Z 8730 in a range from 55 to 84 % when caprylic triglyceride is mixed at a (pigments)/(caprylic triglyceride) mixing ratio of 84/16 by weight. In claim 11, the pigment particles coated with the inorganic coating films have a decrease rate of a color difference defined by Hunter's color difference formula defined in 6.3.2 of JIS Z 8730 in a range from 70 to 89 % when water is mixed at a (pigments)/(water) mixing ratio of 84/16 by weight.

In Schmid et al., substrate particles, organic solvent, water and catalyst are charged and the metal compound to be hydrolyzed is added. The particles may have colorless coatings with a refractive index of 1.8 or less. In claim 10, the pigment particles coated with the inorganic coating films have a decrease rate of a color difference defined by Hunter's color difference formula defined in 6.3.2 of JIS Z 8730 in a range from 55 to 84 % when caprylic triglyceride is mixed at a (pigments)/(caprylic triglyceride) mixing ratio of 84/16 by weight. In claim 11, the pigment particles coated with the inorganic coating films have a decrease rate of a color difference in a range from 70 to 89 % when water is mixed at a (pigments)/(water) mixing ratio of 84/16 by weight. Thus, a change of color of the pigment particles coated with the inorganic coating films when caprylic triglyceride or water is added is reduced. In Schmid et al., the reduction of the change of color of the pigment particles and the decrease rate of the color difference are not disclosed or suggested.

In Nishihara et al., coated pigment is formed by contacting a hydrophilic pigment with a metal alkoxide in an organic solvent to form a coating on the surface of the pigment. The change in color of the test pieces immersed in water or 1N NaOH was measured in accordance with JIS Z8730, but the change in color was obtained along the passage of time. In claims 10 and 11 of the invention, decrease rate of the color difference when mixed with water and caprylic triglyceride is obtained. Although JIS Z8730 is referred to in Nishihara et al., the decrease rate of the color difference in claims 10 and 11 of the invention is not disclosed or suggested in Nishihara et al.

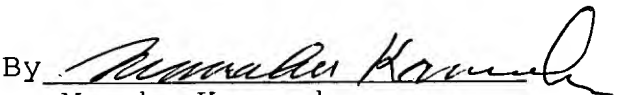
Therefore, even if Schmid et al. and Nishihara et al. are referred to, claims 10 and 11 are not obvious.

As explained above, the present invention is patentable over the cited references.

Reconsideration and allowance are earnestly solicited.

Respectfully Submitted,

KANESAKA AND TAKEUCHI

By 
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